Diamond ASA C1030H Natural

LyondellBasell Industries - Acrylonitrile Styrene Acrylate

General Information

Product Description

Diamond ASA C1030H is a High-Heat Acrylonitrile Styrene Acrylate (ASA) product with excellent Heat-Aging and Weathering properties; Very High Gloss; High Distinctiveness of Image (DOI). ASA C1030H is readily processed by Extrusion and Injection Molding and is available in North America.

General

Features	• Good Colorability	• Good Weather Resistance	• High Gloss
Processing Method	• Extrusion	• Injection Molding	

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.08		ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
220°C/10.0 kg [2]	6.0	g/10 min	
230°C/3.8 kg	1.4	g/10 min	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [3] (Yield)	6960	psi	ASTM D638
Tensile Strength [4] (Break)	5510	psi	ASTM D638
Tensile Elongation [3] (Break)	28	%	ASTM D638
Flexural Modulus - 1% Secant [5] (0.125 in)	363000	psi	ASTM D790
Flexural Strength [5] (Yield)	4900	psi	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (73°F)	3.4	ft·lb/in	ASTM D256
Instrumented Dart Impact [6]			ASTM D3763
Total Energy	372	in·lb	
-4°F, Total Energy	53.1	in·lb	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	101		ASTM D785
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
66 psi, Unannealed, Injection Molded	208	°F	
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	183	°F	
Vicat Softening Temperature	234	°F	ASTM D1525 [7]

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	176 to 185	°F
Drying Time	4.0 to 6.0	hr
Suggested Max Moisture	0.020	%
Suggested Shot Size	40 to 70	%
Rear Temperature	446 to 500	°F
Middle Temperature	450 to 500	°F
Front Temperature	455 to 500	°F
Nozzle Temperature	428 to 500	°F

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Injection	Nominal Value	Unit
Processing (Melt) Temp	428 to 500	°F
Mold Temperature	160 to 180	°F
Injection Rate	Fast	
Back Pressure	75.0 to 149	psi

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] Procedure A

[3] Type I, 2.0 in/min

[4] 2.0 in/min

[5] 0.079 in/min

[6] 22.0 ft/sec

[7] Loading 1 (10 N)